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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,329	07/24/2006	Henning Sirringhaus	Q90316	6691
23373 7590 04/06/2011 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER OLSEN, KAJ K	
			ART UNIT 1724	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

## **DETAILED ACTION**

### **Response to Arguments**

1. Applicant's amendment to the claims will not be entered because the amendment presents additional claims without cancelling a corresponding number of claims, does not appear to rectify the examiner's previous 112 rejection and appears to further confuse the issues concerning the claimed invention (see the discussion below).
2. Applicant urges that the amendment to claims 30 and 42 overcomes the examiner's previous rejection that these claims were incomplete. The examiner disagrees. In particular, the examiner's main objection was that the microchannel formed in the single operation is not the same microchannel utilized for a flow of liquid or gas in the microchannel because a number of other layers are deposited into the microchannel between the single operation and the flow of liquid or gas (e.g. layers 4, 5 and 6 all redefine the formed microchannel). Compare the channel formed in fig. 1A(II) with the channel utilized for liquid or gas in fig. 1A(III), fig. 5(A) or fig. 6. Simply changing "said microchannel" to "a portion of said microchannel" doesn't address that critical steps of the invention that changed the microchannel into a portion of the microchannel. Moreover, the amendment to the claims appears to confuse the issue because it sets forth the semiconductor layer, gate electric (dielectric? (see below)) layer and the gate electrode before the step of the single operation when each of these layers is only disclosed as being formed after the single operation. Because it was the forming of the semiconductor layer, gate dielectric layer and gate electrode that changed the microchannel into a portion of the microchannel, it is unclear why applicant has specified these forming steps before the single operation. If the claims were amended to instead state that the forming of the semiconducting layer, gate dielectric layer and

gate electrode occurred after the single operation that defines the source and drain electrodes, while keeping the “a portion of” limitation, the examiner would consider withdrawing the pending 112 rejection.

3. The examiner is also confused by the now claimed “gate electric layer” in claim 30.

Does applicant mean --gate dielectric-- (see claim 42 for example)? The examiner does not see any support for a gate electric layer.

4. New claims 48 and 49 are confusing because they appear to go against how claims 30 and 42 have been amended. In particular, in claims 30 and 42 applicant called the microchannel that had the liquid or gas flowed through to be a portion of the said microchannel (i.e. part of the same microchannel). Now new claims 48 and 49 call this portion a second microchannel. Calling this formed channel both part of the same channel and a different channel is both inconsistent and confusing.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAJ K. OLSEN whose telephone number is (571)272-1344. The examiner can normally be reached on M-F 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Keith D. Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kaj K Olsen/  
Primary Examiner, Art Unit 1724

March 30, 2011